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ABSTRACT

Immigrant status carries considerable challenges to survival and mobility in U.S. society. As an emerging dimension of social stratification, legal status influences not only immigrants but also their children. Using data collected in Houston and San Diego, this study examines the intergenerational health consequences of undocumented status for child well-being. Results support the argument that children with undocumented immigrant parents suffer higher risks of poverty and poor health than children in legal households, and children in mixed-status households are equally disadvantaged despite having a legal parent. Children in legal households are wealthier and have more food, better living quarters, and better health insurance and health status. Drawbacks to being raised in families with one or more unauthorized residents offer further evidence of a growing policy dilemma about access to health care and the general well-being of children. Addressing these needs carries particular significance for the future of a growing Chicano/a population, among whom research documents an observable health deficit. This deficit, which may also exist among other Latino groups experiencing high rates of undocumented migration and uncertain legal status outcomes, contributes to existing health disparities and racial and ethnic inequality in the United States. (Contains 62 references.) (Author/SM)

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Child Well-Being and the Intergenerational Effects of Undocumented Immigrant Status

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Abstract

Immigrant status carries considerable challenges to survival and mobility in U.S. society. As an emerging dimension of social stratification, legal status further complicates the situation, influencing not only immigrants but also their children. Using data collected in Houston and San Diego, this study examines the intergenerational health consequences of undocumented status for child well-being. The main findings support my argument that children with undocumented immigrant parents suffer higher risks of poverty and poor health than children in legal households, and that children in mixed-status households are equally disadvantaged despite having a legal adult at home. In contrast, children in legal households are wealthier and have more food, better living quarters, better health insurance status, and better health status. The drawbacks of being raised in families with one or more unauthorized residents offer further evidence of a growing policy dilemma about access to health care and the general well-being of this vulnerable population of children. Addressing these needs carries particular significance for the future of a growing Chicana/o population, among whom these findings document an observable health deficit. As such, this deficit, which may also exist among other Latino groups experiencing high rates of undocumented migration and uncertain legal status outcomes, contributes to existing health disparities and racial and ethnic inequality in the United States.

Child Well-Being and the Intergenerational Effects of Undocumented Immigrant Status

INTRODUCTION

Immigration has profound effects on the health and well-being of adults and children. Whether permanent or periodic, movement across international borders generates health risks stemming from encounters with new viral and bacterial agents and the stresses of adapting to a foreign environment and lifestyle. For many immigrants, uncertain legal standing in the host country raises the ante, calling for greater attention to the policy and social implications of the effects of legal status on well-being.

In U.S. society, legal status has emerged as a salient dimension of political, economic, and social stratification. Considerable challenges to well-being confront individuals who are not citizens or legal residents. Undocumented status leads immigrants to a narrow range of job and wage opportunities and poor working conditions, and provides little recourse to civil rights abuses (Phillips and Massey 1999; NACLA Report on the Americas 1999; Reuss 1999; Moore 1986). Compared to legal and U.S.-born residents, very few undocumented immigrants are unemployed, but most work in low-status jobs, primarily in the agriservice industry, for longer hours, less pay, and fewer benefits (Borjas and Tienda 1993; Donato, Durand, and Massey 1992, Sorenson and Bean 1994; Powers, Seltzer, and Shi 1998; Chavira-Prado 1992).

As a result, many undocumented immigrants are poor, often living below established poverty thresholds. Studies linking poverty and health around the world suggest that material conditions are the underlying root of ill health. Poverty influences health not only by limiting access to the "fundamental building blocks of health such as adequate housing, good nutrition and opportunities to participate in society," but also through its effects on mental health and child-rearing (Shaw, Dorling, and Smith 1999: 216). Like other immigrants, those without documents are especially likely to be medically underserved, to lack health insurance, and to rely on emergency medical care—factors that increase the

risks of preventable death. They are ineligible for many public benefits programs designed to help poor families. Even among immigrants who are eligible, however, use of public assistance tends to be lower relative to the native-born, especially in mixed-status households that may contain citizens, as well as legal and undocumented immigrants (Chavez et al. 1997; Halfon et al. 1997; Fix and Zimmerman 1999).

Yet, apart from the ethical debates stimulated by the passage of Proposition 187 in California, research on the impact of undocumented status on health is conspicuously absent from the health literature (a few exceptions include Moore 1986; Chavez et al. 1997; Norton, Kenney, and Ellwood 1997; Siddharthan and Ahern 1996; and Schur et al. 1999). This gap is due in part to data limitations. Because of the delicate nature of issues surrounding legal status, past data collection rarely gathered information about legal status—particularly in recent years after massive welfare reform excluded most immigrants from most social service programs. Much of what is known about the effects of legal status on social adaptation has been derived from the Legalized Population Survey (LPS), which gathered information from persons who sought legal status under the amnesty provisions of the Immigration Responsibility and Control Act of 1986 (see for example, Tienda and Singer 1995; Powers, Seltzer, and Shi 1998; U.S. Department. of Labor 1996). Another source is the Mexican Migration Project (1999), which collects data from randomly selected migrant and nonmigrant households in origin villages and smaller nonrandom samples in U.S. destinations. Although both of these data sets are improvements over U.S. census data, neither offers much health information. As a result, smaller regional and local surveys have stepped in to fill the gap. Most, however, focus on access to health care rather than on health outcomes.[1]

The present analysis adds new information from ongoing research about the relationships between health and migration. Based on randomly selected households of Mexican immigrants in two

[1]Nalven (1984) argues that this is because government agencies and elected officials are less interested in documenting health problems or improving services in this population than in determining the fiscal costs, job displacement, and other burdens attributable to undocumented individuals.

neighborhoods (one in San Diego and one in Houston), this study contributes to current debates about the health findings that continue to perplex epidemiologists and demographers. In particular, research has found that many recent immigrants are healthier than U.S.-born individuals on a number of outcomes and, counterintuitively, that their health worsens with extended durations in the United States (Scribner and Dwyer 1989; Guendelman, English, and Chavez 1995). These findings challenge conventional assimilation theories that predict that immigrant adaptation to U.S. lifestyles will progressively improve well-being. The present analysis examines an unexplored piece of this puzzle by focusing on the differences in legal status among immigrants, specifically examining the effects imparted by legal status and recency of migration on child health. The main results indicate that children of undocumented immigrants are poorer, are unlikely to have health insurance, and suffer poorer health status than children of legal resident parents.

THEORETICAL BACKGROUND

Health and Adjustment of U.S. Immigrants

Since the late 1980s, approximately one million immigrants have entered the United States each year (up from 650,000 in 1986 [Massey and Singer 1995]). By 1998, 9.8 percent of the U.S. population was foreign-born, and approximately 27 percent of this group was from Mexico. Estimates suggest that about half of foreign-born Mexicans lack legal documents (Massey 1995, Camarota 1999). No longer limited to economically motivated single men searching for employment, immigrants from Mexico (the leading source of U.S. immigrants) now include substantial numbers of women and children, and most have strong family ties to U.S. residents (see Kanaiaupuni 2000; Donato 1993; Houstoun, Kramer, and Barrett 1984). A large proportion of Mexican immigrants are poor; about 31 percent lived in poverty in 1998 (Camarota 1999).

Theories of immigrant incorporation and adaptation to date appear inadequate for explaining the health profiles of this growing population. Classic assimilation theories argue that recently arrived immigrants begin with an initial disadvantage attributable to their lack of English language skills, lower educational attainment, and inexperience in the new destination, all of which influence their labor market prospects. As they gain experience in the host society and begin to assimilate to U.S. life, newcomers gradually achieve educational, occupational, and economic mobility, the keys to successful integration into U.S. society (Gordon 1964; Neidert and Farley 1985). Thus, although we might expect variable rates of adaptation between groups (Gans 1992), these theories lead us to expect improvements in health status over time among immigrants, especially those who are moving from poorer to wealthier nations.

Although some approaches to immigrant assimilation have focused on the declining "quality" of newcomers to the United States over time (Borjas 1990), other developments have posited diverse paths to immigrant incorporation. A key insight of these is that mobility is not always upward. The direction of assimilation depends not only on prior human capital investments but also on a variety of contextual conditions including political reception, race/ethnicity, discrimination, and neighborhood and labor market environments (Portes 1995; Zhou 1997). Some researchers use "segmented assimilation" theories to explain how, with longer U.S. residence, certain immigrant groups actually perform worse in school, have poorer nutrient intakes, and experience more pregnancy and health complications (Zhou 1997; Kao and Tienda 1995; Guendelman and English 1995; Rumbaut 1997).

Segmented assimilation theories, therefore, offer a partial explanation for the possibility of deteriorating immigrant health over time. However, like classical assimilation approaches, they are unable to account fully for the empirical findings that have attracted much epidemiologic and demographic attention since the 1970s. Popularly dubbed the "epidemiological paradox," these findings suggest that immigrants have better health than many of their U.S.-born counterparts (for review, see National Research Council 1998). For example, although traditional indicators such as lower education

and socioeconomic status lead most to expect poorer health status among immigrants, research shows comparable health profiles among foreign-born Mexicans and U.S.-born Anglos (non-Hispanic whites), who are wealthier, more educated, and better medically served. Also puzzling are intergenerational comparisons that record superior birth and mortality outcomes among foreign-born Mexican immigrants relative to second and higher generation U.S.-born Mexicans—and similar findings have been reported among several southeast Asian groups (Weeks and Rumbaut 1991; Rumbaut and Weeks 1996; Landale, Oropesa, and Gorman 1998).

The puzzle is magnified by the fact that the majority of recent immigrants not only are poor but have moved from the presumably inferior health regimes of developing countries to the presumably superior health technology and service context of the United States. Yet, with longer durations in the United States, most proximate health risks rise rather than fall—including infant mortality, low birth weight infants, cancer, high blood pressure, adolescent pregnancy, and psychiatric disorders (Vega and Amaro 1994; Rumbaut 1997). Together, these two sets of findings—initial health advantages among immigrants and declining health status over time—call into question some fundamental assumptions of assimilation theories. That they have been called paradoxical, some argue, "reflects an unexamined assimilationist discourse that presupposes that any change from foreign to native norms of conduct and consciousness must be for the better" (Rumbaut 1997:494).

To explain these findings, some researchers have suggested that cultural factors initially may diminish the deleterious effects of poor socioeconomic status on health. Although the precise nature of these protective symbols, attitudes, and practices remains ill-defined (Williams and Collins 1995), the general argument is that, over time, any protective cultural advantages begin to erode as successive generations adopt more typical U.S. lifestyles (Guendelman, English, and Chavez 1995; Scribner and Dwyer 1989).

Poverty and the structural conditions found in the poor neighborhoods where many immigrants reside are clearly part of the problem. Despite recent geographic shifts, the vast majority of immigrants experience U.S. residence in poor urban neighborhoods (Frey and DeVol 2000). In this setting, immigrants have daily contact with poor minority segments of the population and with the institutions that serve them. For many reasons, with longer exposures in these neighborhoods, immigrants may experience little, or even downward, mobility in terms of their educational attainment, occupational status, and overall health (Ogbu 1974; Portes and Zhou 1993; Portes 1995; Perlmann and Waldinger 1997; Rumbaut 1997).

The primary hypothesis that guides this paper concerns a part of the explanation yet unexplored by the above theories—that legal status plays a vital role in determining immigrant health and well-being. Typically, measures of immigrant status include nativity, English language ability, time in the United States, and age at migration (where data permit). Fewer studies have addressed the impact of documentation or legal status. Certainly, however, the event of naturalization or citizenship is an important marker of assimilation, opening new doors to some, whereas those who lack legal papers are denied access to standard paths of upward mobility. Because legal status influences the social, political, economic, and health care environments of households, undocumented immigrants and their families face greater health challenges on a daily basis than do those with resident or naturalized status. It may also be that the healthier outcomes of recent immigrants are linked to differences in legal status among Mexican immigrants.

Legal Status and Health: The Sociopolitical Context

Immigration in the last decades of the twentieth century was marked by two trends: rising rates of undocumented immigration and escalating concerns about the costs imposed on U.S. workers and the economy by immigrants. The latter was especially profound in cities that suffered from the onset of a deep recession in the late 1980s. These trends led to laws designed to control undocumented

immigration, beginning with the Immigration Reform and Control Act (IRCA) passed in 1986. However, despite the tide of new enforcement activity generated along the Mexico-U.S. border, undocumented migration showed few signs of diminishing (Donato, Durand, and Massey 1993; Bean, Edmonston, and Passell 1990).

Attention to the health implications created by these processes has been limited primarily to heated national debates over the ethics and economics of providing health care and other publicly financed services to undocumented persons. Much of the controversy began with the introduction and passage of Proposition 187 in California in 1994. Proposed by Governor Pete Wilson, the bill cited the costs of the "millions" of unauthorized entrants into the United States and the "millions" more that would follow, given the giant magnet of federal incentives. Although Proposition 187 was never implemented because of its constitutional implausibility, it was soon followed at the federal level by the Illegal Immigration Reform and the Immigrant Responsibility Act in 1996. This act was passed into law as part of President Clinton's massive overhaul of welfare programs and policies, which, among other things, limited public assistance to all immigrants and beefed up border security.

The actual health implications of being undocumented in the United States have drawn far less attention than the costs of immigrant health care. With the "renewed emphasis on domestic reform in the areas of health, education and welfare," both legal and undocumented immigrants now find themselves "caught in a protracted battle over benefits eligibility and state/federal division of the cost for delivering those services" (Gonzalez-Baker 1997:24). Moreover, the battle becomes muddled by, and often overlooks, the implications for immigrants' children who are U.S. citizens.

In this context, the health hazards are many for undocumented immigrants and their families, relative to citizens and legal residents. To begin with, the risks to health and safety are particularly high along the border. The consequences of entering the United States without legal documents are reflected

in rising numbers of border-related deaths and accidents.[2, 3] All too often, "these casualties remain unknown at death or are identified as 'Mexican.' Collectively, they have become the desaparecidos (the disappeared) of the border" (Eschbach et al. 1999: 430).

Those who make it across, however, do not immediately find a better life. Unauthorized entrants grapple with widespread hostility and constant fears of detection, both of which may compromise their health. Rejection from hospitals, medical offices, and public service agencies are the most obvious examples. Delayed medical attention is common, aggravating the severity of most health problems. Also threatening, however, are the insidious, life-long effects stemming from failed preventive and medical care, disrupted immunization schedules, and poor nutrition during childhood that reduce overall well-being throughout the course of life. Given this scenario, it is not surprising that health conditions worsen, rather than improve, over time.

Several studies attest to the hazardous nature of undocumented status in the United States. Ironically, despite widespread perceptions of undocumented immigrants moving to the United States for free health care services, most research documents inadequate access to health care as a serious problem facing immigrant households. Inadequate access stems from legal uncertainty and misinformation on the part of both health care providers and patients, variation in coverage policies at the state and county levels, language obstacles, transportation barriers, and high health care costs (Moore 1986; Flores et al. 1998). As a result, Chavez and colleagues (1997) find that undocumented immigrant Latinas in Orange County, California, were significantly less likely to have any type of medical insurance and that as many

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[2]For example, in late September 1999, Tucson officials reported that a record number of illegal entrants died trying to cross the Mexico-U.S. border (Reuters, Oct. 4, 1999). The deaths were caused by vehicle crashes, exposure and dehydration, accidents, and illnesses.

[3]A study by Eschbach et al. (1999) reports that from 1993 to 1997, more than 1,600 deaths were recorded in the Mexico-U.S. border region, ostensibly during the process of entering the United States without inspection. The study points out that this number most likely reflects an underestimate because it excludes bodies never found by government officials, plus an uncertain number of would-be migrants who died before crossing the northern border of Mexico (Mexican records identify more than 500 river drowning deaths between 1993 and 1997).

as 41 percent lacked a regular source of medical care (compared to only 16 percent of those with documents and 2 to 4 percent of the U.S.-born). Undocumented status also dramatically lowered the chances that women received annual cancer screening tests. For the most part, for unauthorized residents, who have higher rates of employment than citizens, employment does not provide private insurance or a livable wage for their families, and unauthorized status "also reduces the likelihood that eligible children will be enrolled in Medicaid, thus leaving many uninsured" (Halfon et al. 1997).

These patterns are mirrored in a recent study by the Kaiser Family Foundation. The investigators report that about 80 percent of undocumented Latinos in their Fresno/Los Angeles sample lacked health insurance and that, compared to the general U.S. population, only one-third to one-half as many had visited a physician in the past year. They conclude that immigration from Latin America is rarely motivated by the need for health care. They also suggest that restricting medical care for these immigrants is problematic for at least two reasons: first, many undocumented individuals have U.S.-born children with unrestricted rights as citizens, and, second, because "the care being used . . . is either limited to childbirth or already at such a *minimal level* that [it] is likely to be truly necessary" (Schur et al. 1999:8). In Florida, Siddhartan and Ahern (1996:5) find clear evidence of "a sicker undocumented immigrant population receiving unequal treatment," measured by shorter stays for similar diagnoses and fewer tests or procedures performed. They report that limited access to health care, fear of deportation, and lack of financial resources cause delays in seeking primary care, resulting in admission at later stages of disease with more complications and comorbidities.

These findings carry legal and ethical implications (see Schwartz 1997; Galarneau 1994), but also hold economic repercussions. For example, several studies argue that denying medical care to undocumented pregnant women will not save taxpayers any money (Norton, Kenney, Ellwood 1997; Serb 1995; Schwartz 1997). Compared to the costs of prenatal care, poor birth outcomes stemming from delayed prenatal care result in substantially greater costs to the public for the labor, delivery, and

hospitalization of pre-term, low birth weight, or otherwise compromised births. The same is true for other health-related problems that are more expensive to treat when diagnosed at later stages of complication.

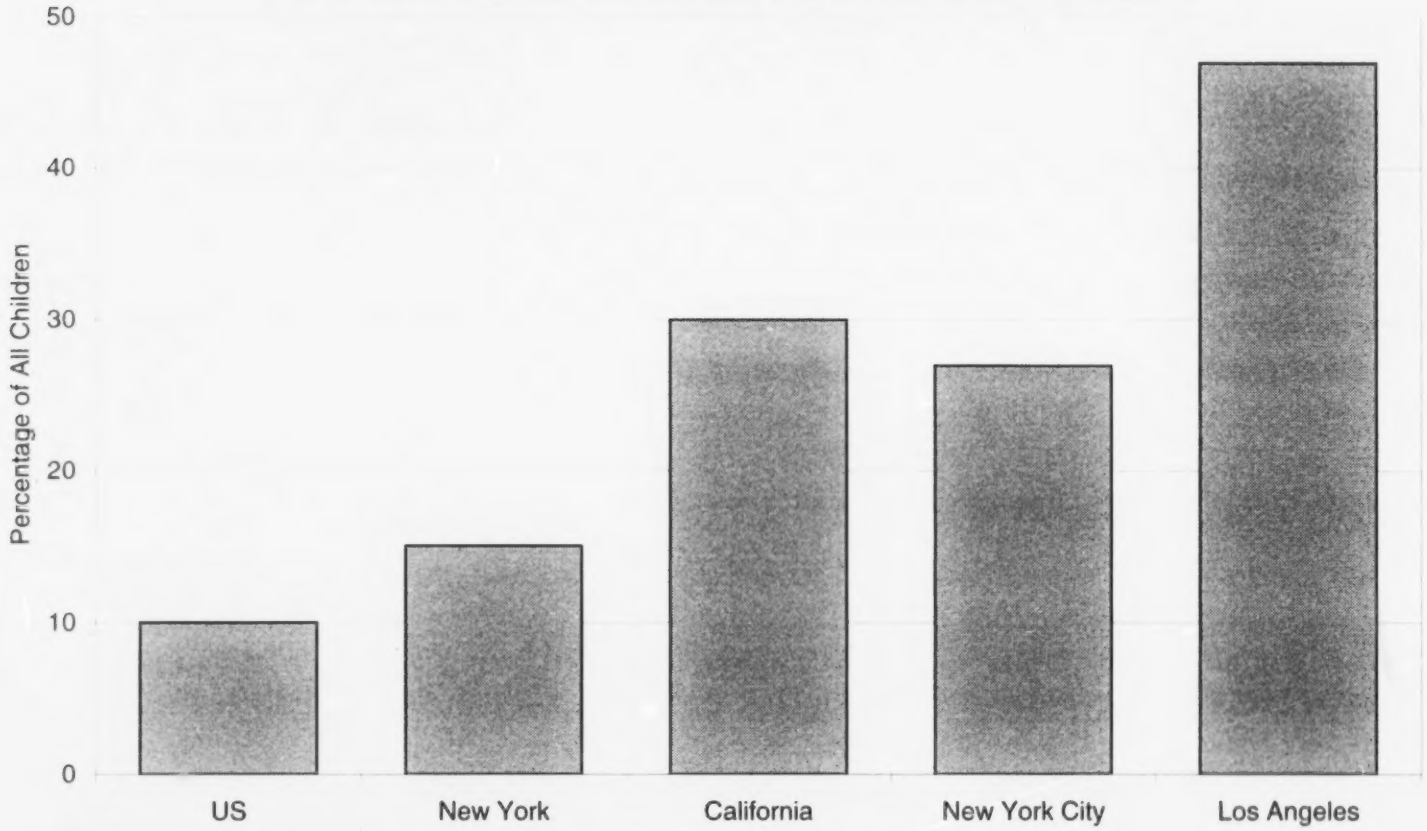
The present study investigates the health effects of legal status and recency of migration. Because children are often the ones who may suffer the most in nonlegal households—subject to the fears and abilities of their own parents in addition to overt hostility and discrimination by U.S. residents and institutions—I focus on child health and well-being. Two primary research questions address the hypothesis that legal status is key to health status. First, does the epidemiological paradox apply to children—specifically, are children of immigrants with less U.S. experience healthier than those with greater U.S. experience? Second, are the health risks faced by U.S. citizen and non-citizen children of undocumented parents higher than children of documented parents.

Recent figures suggest that a nontrivial share of U.S.-born children live with immigrant parents. The 1990 census counted 2.1 million foreign-born children in the United States. Adding U.S.-born children of immigrants boosts the total to more than 5 million (Fix and Passel 1994). Furthermore, according to a recent study based on 1998 Current Population Survey data, one in ten children in the United States lives in a family of mixed immigration status, as shown in Figure 1, and almost half of all children in Los Angeles live with at least one undocumented parent (Fix and Zimmerman 1999).

Prior studies suggest that children of immigrants face unusually high health risks (Guendelmen and English 1995; American Academy of Pediatrics 1997). Unhealthy living conditions are common among children with parents who work in U.S. agriculture, in particular. In addition to high risks of accidents and deaths, as well as substandard shelter and medical care, children and their parents are frequently exposed to toxic pesticides that cause high rates of birth defects and skin or respiratory problems (Chavira-Prado 1992; Strigini 1982; Johnston 1985). Moreover, prenatal care is often delayed among Mexican-born women, causing greater likelihoods of child illnesses (Guendelman, English, and Chavez 1995; Norton, Kenney, and Ellwood 1997). Although they did not examine legal status

FIGURE 1

Share of All Children Who Live in Mixed Immigration Status Families, 1998[a]



[a]Mixed status refers to U.S.-citizen children with at least one documented parent.

Source: Fix and Zimmerman (1999), based on 1998 CPS data.

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differences, Guendelman and English (1995) found that despite being less likely to be premature or underweight at birth, Mexican children of recently arrived mothers in California had much higher chances of serious illness during the first year of life. Therefore, even if children of immigrants are born healthy, an important question is how they fare over time in the face of socioeconomic and legal status disadvantages. The answers to the research questions set forth here are crucial to policy and social debates about the relative costs and benefits of providing health care services to immigrants. They also have important implications for the future of Mexican-American children, especially given the significant presence of mixed-status households in U.S. society today.

DATA AND METHODS

Data

The materials for this exploratory analysis come from a larger binational project that surveys households in Mexico and in the United States (see Donato and Kanaiaupuni 1996). This paper uses the U.S. data that were collected from a total of 262 households randomly chosen in two neighborhoods (one in Houston, and the second in San Diego County). We chose these two communities because they were the primary destinations for migrants in our Mexico sample.

In each city, we began by defining neighborhoods (using census tract and block information) that contained high concentrations of foreign-born persons and those of Mexican national origin. Because census data were relatively dated by the time of our surveys, we spent several days walking through the neighborhoods defining and redefining their boundaries. This was especially important in Houston, a city without zoning laws. As a result, we excluded a few block groups where relatively large commercial establishments were situated (typically on the edges of our neighborhood areas). Once the definitions and boundaries for each neighborhood were established, we obtained a list of all household addresses in the neighborhood from the city planning office and randomly chose our sample households from this list.

One strength of the sample is that the two neighborhoods are very different from each other. The San Diego neighborhood contains a relatively young population, with many young children, few home owners, and many recently arrived Mexican migrants. The Houston neighborhood is more established, older, with fewer recent arrivals, but more home owners and more two-parent households. To the extent that other immigrant destination areas share the same characteristics, we argue that our sample data are representative of these areas.

Our Health and Migration Survey (HMS) was conducted in Houston during the summer of 1996, and in San Diego during the summer of 1997. The HMS was originally designed to secure information on the health of migrants and their families with a special focus on women and children. Women were the primary respondents and they provided detailed information about themselves and their households. Respondents were paid $20 per completed interview. Approximately 15 percent of the randomly selected addresses that were contacted declined to answer the survey.

Prior research on immigration status and health has used various criteria to define and measure immigrant and legal status (see review in Vital and Health Statistics Report 1999). This project collects migration and labor histories using ethnosurvey methods (see Mexican Migration Project 1999). We define immigrant households as those including couples who were either born in Mexico, married to someone born in Mexico, or both. We also gather information about the birthplace of the respondents' parents and about legal status of all household members. Together these materials provide us with valuable information about health and well-being among Mexican immigrant households in the United States.

Health Outcomes

This analysis examines several outcomes related to child health. Reproductive health data were collected from mothers who had experienced childbirth within a 7-year period prior to the survey. Detailed histories from these mothers focused on the two most recent births during this period, yielding

219 complete child histories. For this sample of children, the first dependent variable is **health status**, which is a measure of overall health of children (mothers reported health status on a 5-point scale ranging from excellent to very poor; no children had very poor health). Although self-reported health status is not an ideal indicator of health conditions, studies have found it a surprisingly accurate predictor of subsequent ill-health and mortality (Idler and Benyamini 1997; Mare and Palloni 1988). Moreover, in the context of this population, this measure may be less biased than those that rely on medically diagnosed conditions or clinic reports, given low rates of health insurance and otherwise limited health care access.

The second health outcome is **recent illness** in the 2-weeks prior to the survey. Recent illnesses cover the incidence, timing, and duration of a range of specific symptoms such as coughing, fever, vomiting, diarrhea, fatigue, and additional open-ended categories for the timing, type, and duration of other illnesses experienced. These items are coded to reflect the incidence of more serious conditions that lasted at least 10 days (yes = 1, no = 0). Shorter illnesses also were included if the mother reported feeling that the child was gravely ill (seven cases).[4]

U.S. Migration and Other Independent Variables

The primary focus of this analysis is the effect of legal status. Legal status categories include legal resident, bracero/contract worker, Silva letter, amnesty recipient (SAW or LAW), tourist, local passport, naturalized or U.S.-born citizen, undocumented, refugee, and unknown. Persons without documents and tourists who had overstayed their visas or were working are considered undocumented. A set of dummy variables categorize legal status as follows: (1) legal head and spouse (if there was one), where individuals were either U.S.-born and/or reported legal documents to live and work in the United

[4]I also tested for differences with a 1-week duration (where serious conditions lasted more than 1-week), which resulted in a few more children who were recently ill (an additional 5 percent legal, 6 percent undocumented, and 1 percent mixed status) and otherwise similar effects except for insignificant effects attributable to tobacco use during pregnancy or immediately following birth.

States;[5] (2) mixed legal status of head and spouse (if there was one), where either one was U.S.-born and/or reported legal documents, while the other one reported illegal or no documents; and (3) undocumented or illegal head and spouse (if there was one). The second primary concern is U.S. experience, which, according to assimilation theories, should shape health outcomes through its effects on health behaviors, household resources, and knowledge about services. Thus, I include a measure of mothers' accumulated U.S. experience measured in years, including noncontinuous periods.

The specific hypotheses to be tested derive from the literature reviewed above:

- H_1: Based on recent epidemiological findings, children of recently arrived parents are healthier than those with parents who have greater U.S. experience.
- H_2: Children of undocumented immigrant parents are worse off than those headed by legally documented parents.
- H_3: Children with one legal parent and one undocumented parent experience few substantial improvements, relative to children in undocumented households, given the tenuous position of the undocumented parent that constrains the entire household.

To test these hypotheses, I include controls for other individual and household characteristics related to the outcomes of interest, including age of the child, birth order, and place of birth (there were no differences in health status by sex, not shown); mothers' age and education (in years); the number of children under 7 years old in the household; and monthly household income.[6] A final, critical set of variables account for the effects of related health behaviors and characteristics including duration of lactation, tobacco use (during pregnancy and immediately following birth), alcoholic intake (the survey

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[5]This category may include two-parent households where one parent is U.S.-born and the other is a foreign-born immigrant with legal documents; however, because of my focus on children of immigrants, children who had two U.S.-born parents were excluded from the sample used in this analysis.

[6]Income is a pooled measure of all sources reported by the respondent, including any contributions from children or other family members, rent, or other income. In three households, income was missing and imputed based on the average incomes of nonmissing cases. In the interest of parsimony (and few degrees of freedom), I tested for marital status differences, but dropped the variable after finding no significant improvements in the explanatory model. Age of the mother also was highly collinear with child birth order and therefore eliminated.

asks only about use in the past month), and health insurance status. The models for recent illness also include an indicator for poor health status to control for pre-existing poor health histories.[7]

Logistic regression is used to estimate the probability of a recent illness, and maximum likelihood ordered probit estimation is used to examine variation in general health status. In the latter case, ordered probit models are appropriate because they assume an unobserved, continuous distribution approximated by a categorical dependent variable, and thus they allow for the rank-ordering of outcomes without making assumptions about the intervals between categories. Ordered probit estimates are interpreted in the same way as are other probit estimates. Thus, a positive coefficient indicates that an increase in the independent variable leads to a greater likelihood of being in a higher category. A constant term is provided for each category of the dependent variable. The reported robust standard errors are estimated using STATA's cluster option to adjust for household-level clustering (effects remained stable in both magnitude and significance, and no changes emerged when examined for effects due to community-level clustering).

FINDINGS

The first piece of evidence that legal status creates different health contexts can be drawn from Table 1, which presents the descriptive statistics for the sample of children in the three legal status groups. Most children were between 3 and 4 years old, and the majority were U.S. citizens (33 of the 219 were born in Mexico, 33 percent of whom were in legal, 21 percent in mixed status, and 45 percent in undocumented households, not shown). Although the majority of children were in legal households, 46 percent had an undocumented parent. Note that, children in mixed-status households usually were parented by an undocumented mother and her documented partner or husband, as shown in Table 2.

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[7]After testing for significant differences and finding none, I excluded nine children from six households where parents' legal status and U.S. duration could not be determined.

TABLE 1
Descriptive Statistics of Children by Legal Status
(proportions and means)

Sociodemographic Profile	Legal	Mixed Status	Undocumented
Individual Characteristics[a]			
Child attributes			
Age	4.0	3.2	3.5
Birth order	3.0	2.8	2.7
N	119	60	40
Maternal & Household Characteristics[b]			
Maternal attributes			
Age	32.4	28.9	29.0
Education	6.6	6.0	7.3
Years in the United States	11.0	6.9	5.6
Household attributes			
No. of children ≤ 7	2.0	2.4	2.9
Monthly income 0-$899	0.10	0.17	0.37
Monthly income $900-1299	0.30	0.33	0.44
Monthly income 1300-1999	0.35	0.31	0.15
Monthly income $2000 plus	0.24	0.19	0.04
Median total income	1500	1290	875
Median food expenses	300	293	202
Median rent expenses	428	400	395
N	79	36	27

[a]N = 219 children.
[b]N = 142 households.

TABLE 2
Children in Mixed-Status Households

Father Documented, Mother Undocumented	55
Father Undocumented, Mother Documented	5

Mothers in legal households were slightly older (two of these were U.S.-born women married to foreign-born men, not shown), and education varied slightly across the three groups. Mothers in undocumented and mixed-status households had migrated more recently, averaging 6 or 7 years of U.S. experience compared to 11 years in legal households.

Differences in incomes were substantial between legal status groups. Undocumented and mixed-status households were clustered at the lower end of the distribution, with fewer finances to spend on food and rent. In the average undocumented house, food and rent consumed more than half the monthly budget, leaving about $278 or less per month to provide for about three young children, in addition to older children and adult family members. Eighty percent of children in undocumented households had total income of less than $1,300 per month.

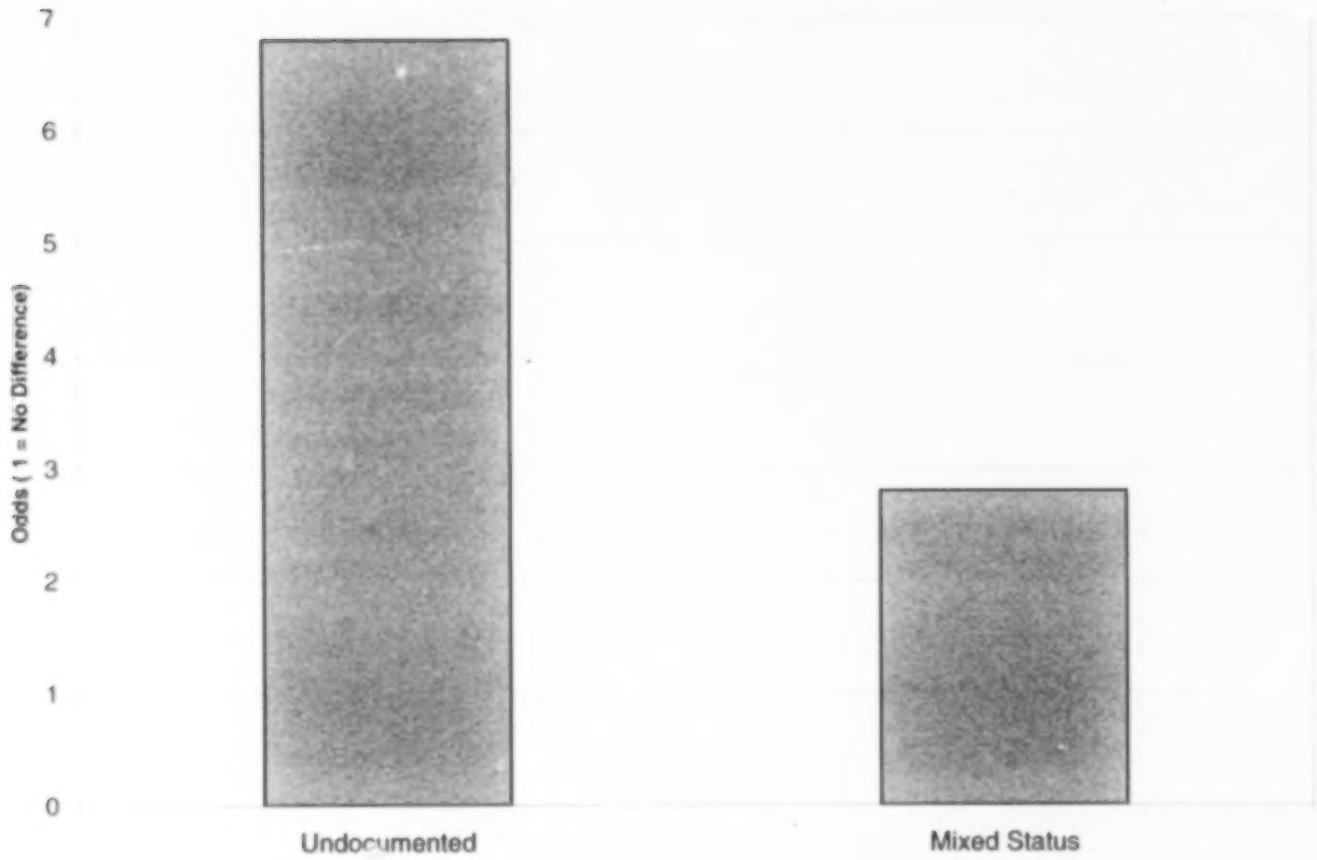
Not surprisingly, I find significantly higher chances of being in the lowest income quartile among households with an undocumented parent than among legal households. Figure 2 summarizes the relative odds of living in a poor household by legal status, net of child characteristics, mother's education and U.S. experience, and the number of young children in the household. The odds of being in the poorest households are 6.8 times higher for children of undocumented parents, and 2.8 times higher for children with mixed-status parents, than for children with legal parents (the differences between mixed and undocumented households are not statistically significant).

In sum, children with undocumented parents were more likely to reside with recent immigrant parents and with more young children at home (about three), and to experience significant economic hardship. Children in mixed households with an documented parent, however, were slightly better off with respect to income levels, but still disadvantaged relative to children in legal households.

For various reasons related to poverty, access to medical care, health insurance, and job opportunities, legal status and migration experiences create very different child health risk profiles. As summarized in Table 3, over one-third of the children experienced an illness during the last 2 weeks of

FIGURE 2

Odds Ratio That Child Lives in a Poor Household, by Legal Status[a]



[a]Odds ratios compare the odds of living in a poor household among children with one or more undocumented parent to the odds of living in a poor household among children with two legal parents, where poor includes household earnings less than $900/month (lowest 25 percentile of the distribution). Model includes age of child, birth order, mother's education and migration status, and number of young children at home.

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TABLE 3
Child Health, Maternal Health Behaviors, and Insurance Status

	Legal	Mixed Status	Undocumented
Child Health Status[a]			
Recent illness			
No recent illness	0.60	0.64	0.66
Minor illness (<10 days)	0.31	0.20	0.24
Serious illness (>10 days)	0.09	0.15	0.11
Overall health status			
Excellent	0.42	0.30	0.28
Good	0.39	0.48	0.53
Fair	0.18	0.22	0.15
Poor	0.01	0.00	0.05
Other Health-Related Characteristics			
Lactation			
Not breastfed	0.19	0.13	0.08
Months breastfed	6.2	7.5	7.6
Timing - immediate	0.77	0.71	0.81
Timing - late (3rd day or more)	0.03	0.12	0.08
Maternal tobacco & alcohol use			
Smoked during pregnancy	0.02	0.02	0.08
Smoked immediately after birth	0.02	0.02	0.05
Did not smoke	0.98	0.98	0.93
Alchohol use in past month	0.12	0.07	0.08
Health insurance status[b]			
Employment benefits	0.35	0.20	0.18
Medicare/CAL only	0.23	0.32	0.18
Employment and Medicare/CAL	0.08	0.03	0.00
None	0.34	0.48	0.63

[a]N = 219 children.
[b]N = 142 households.

the survey, usually one that ended within 10 days. Roughly 9 percent of children in legal households had illness symptoms that lasted for longer periods, compared to 11 and 15 percent in undocumented and mixed households, respectively. Overall, the majority of children also had good or excellent health status, and the major differences lay in the distinction between excellent versus other health statuses. Children in legal households were most likely to have excellent health, whereas those with an undocumented parent more frequently had good or fair health status. The chances of poor health were highest among children in undocumented households.

Health-related behaviors and characteristics that mediate health status also varied across the legal status groups. Most mothers reported breastfeeding, but lactation was most common in undocumented households—and for the longest durations.[8] Few mothers delayed breastfeeding after birth, and most often they were in mixed-status households. Tobacco use during pregnancy was highly uncommon—a total of only six women smoked during pregnancy or immediately following the birth. Twenty-one children had mothers who used alcohol in the month preceding the interview, and the vast majority of them (66 percent) were in legal households.

The last panel in Table 3 suggests that immigrant parents, and especially those with undocumented status, are likely to work in jobs that pay no health benefits. Use of public aid for medical care was most common among legal and mixed-status households, and minimal among undocumented households, despite their greater poverty. Fully 63 percent of undocumented immigrant households lacked health insurance, as did nearly half of mixed-status households. Also troubling, however, about one-third of legal resident households were uninsured. Table 4 indicates the relative odds that

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[8]In separate analyses, I examined legal status and recent immigration effects on lactation behaviors including *prevalence*—whether children were breastfed during infancy; *timing*—how soon after delivery breastfeeding was initiated; and the *duration* of breastfeeding (in months). Significant effects showed slightly reduced odds of lactation among more educated mothers and 40 percent higher odds among mothers with more young children. Also, breastfeeding was most common among mothers with no U.S. experience at the time of the child's birth. U.S.-born mothers in the full sample breastfed less often and for shorter durations relative to immigrant mothers.

TABLE 4
Odds Ratios That Household Has Health Insurance, by Legal Status

Legal Status	Odds Ratio	B	Robust SE
Undocumented	.308	-1.178	0.477
Mixed Status	.460	-0.776	0.418

undocumented and mixed-status households have no health insurance compared with legal households. The results show that health insurance is much less likely in households with an undocumented parent versus two legal parents, even after controlling for mother's education and income. The differences between undocumented and mixed-status households in Table 4 are insignificant. Once a control for U.S. experience is added, however, the mixed-status effect becomes insignificant whereas undocumented households remain significantly less likely to be insured, relative to legal households, perhaps suggesting greater information or access-related behaviors that change over time among mixed-status households.

Table 5 examines recent serious illness experienced by children in the last 15 days. Successively added to the basic model are differences attributable to U.S. experience, legal status (column 2), and health-related behaviors and insurance status (column 3). The results show insignificant effects due to U.S. experience, even after controlling for legal status.[9] In addition, children with older mothers and living in households with more young children under 7 years old have higher chances of recent illness. The full model (column 3) produces stable results, net of other explanatory variables such as pre-existing poor health status, which predisposes children to illness, and legal status. However, health behaviors of the mother are critical to child health: length of lactation produces lower odds of recent illness, whereas tobacco use during pregnancy increases illness substantially.

Turning to overall health status, Table 6 provides the results of the analysis predicting excellent to poor health status among children. As before, columns 1 and 2 introduce the effects of U.S. experience and then legal status, and the third model adds other explanatory characteristics. Excellent health is coded as 1 and very poor health as 5 in this scale, so a positive coefficient indicates increasingly poorer health status. Although contrary to the hypothesis generated by recent epidemiological findings, U.S. experience is insignificantly related to health status, but overall, as predicted by my second hypothesis,

[9]Insignificant findings also emerged when I tested for U.S. experience with dummy indicators for less than 5 years, 6 to 10 years, and more than 10 years U.S. duration.

TABLE 5

Odds Ratios and Logistic Regression Coefficients for Recent Serious Illness: Children in San Diego and Houston (n=219)[a]

	Column 1			Column 2			Column 3		
	Odds	B	SE	Odds	B	SE	Odds	B	SE
Individual and Household Characteristics									
Age of child	0.931	-0.072	0.118	0.935	-0.067	0.122	0.921	-0.082	0.115
Birth order	0.850	-0.163	0.147	0.855	-0.157	0.149	0.875	-0.133	0.178
Mother's education	1.000	0.003	0.067	1.011	0.011	0.011	1.030	0.029	0.089
No. of children ≤ 7	1.263	0.233**	0.094	1.273	0.241**	0.098	1.452	0.373**	0.145
Monthly income (÷10)	1.002	0.001	0.001	1.001	0.001	0.001	1.002	0.002	0.001
U.S. Experience and Legal Status									
Total years in U.S.	0.958	1.000*	0.043	0.961	-0.039	0.045	0.933	-0.069	0.053
Legal (reference category)									
Undocumented				0.836	-0.180	0.877	0.485	-0.724	0.638
Mixed status				1.444	0.367	0.532	1.659	0.506	0.556
Health-related Characteristics									
Poor health status							3.346	1.208*	1.208
Lactation (no. of months)							0.891	-0.115**	0.044
Tobacco use							12.973	2.563**	1.245
Alcohol use							1.023	0.023	0.815
Health insurance							0.515	-0.663	0.563
Intercept		-2.085**	0.850		-2.287**	0.951		-2.063	1.084
Log likelihood		-68.84			-68.45			-59.84	
Chi-square		8.70			8.63			16.22	
N		214			214			209	

* $p < .10$; ** $p < .05$.

[a]Five observations were excluded because of missing illness information, and five cases were dropped in the final model because of missing information about smoking or health insurance (column 3).

TABLE 6
Multivariate Ordered Probit Estimates Overall Health Status: Children (<7 yr) in San Diego and Houston[a]

	B	SE	B	SE	B	SE
Individual and Household Characteristics						
Age of child	-0.002	0.034	0.001	0.033	0.002	0.035
Birth order	-0.032	0.031	-0.029	0.031	-0.039	0.043
Mother's education	0.019	0.027	0.018	0.018	0.021	0.028
No. of children ≤ 7	-0.086**	0.037	-0.095	0.038	-0.090**	0.038
Monthly income (÷10)	-0.000	0.000	-0.000	0.000	-0.000	0.000
U.S. Experience and Legal Status						
Total years in U.S.	-0.006	0.013	0.002	0.013	0.003	0.014
Legal (reference category)						
Undocumented			0.366	0.219	0.528**	0.241
Mixed status			0.255	0.193	0.333*	0.197
Health-related Characteristics						
Lactation (no. of months)					-0.008	0.012
Tobacco use					0.030	0.404
Alcohol use					0.519*	0.293
Health insurance					0.290	0.178
Intercept 1	-0.675	0.341	-0.475	0.356	-0.199	0.381
Intercept 2	0.556	0.340	0.469	0.358	1.040	0.391
Intercept 3	1.944	0.376	2.166	0.388	2.463	0.414
Log likelihood	-236.45		-234.63		-225.08	
Chi-square	8.29		12.39		21.63	
N	219		219		215	

* p<.10 ; ** p<.05.
[a]Four cases were dropped in the final model because of missing information about smoking or health insurance (column 3).

children in mixed-status and undocumented households are worse off than those in legal households. The former groups confront significantly higher risks of poorer health, whereas children with two legal parents are most likely to have excellent health.

Findings alerting us to the health costs of illegal status in the U.S. remain significant after adding individual and household characteristics. Children with other young siblings are less likely to have poor health; however, those in undocumented and mixed-status households have dramatically higher risks of poor health. These effects remain significant net of differences in other health-related characteristics including lactation, smoking, drinking, and health insurance status (also note that separate indicators for infants and older children did not improve the model, and that controlling for child's birthplace did not influence health status or other effects).

In summary, I find no evidence for the first hypothesis that children of parents with less U.S. experience encounter a health advantage relative to those whose parents have resided longer in the United States. The results here are more consistent with the second hypothesis that argues that children with undocumented parents have poorer health outcomes with respect to general health status, including children who live in mixed households. With respect to the third hypothesis, I find that children in mixed-status households benefit little from having a legal adult at home. Namely, they appear to experience poverty and poor health status as often as children in undocumented households, but are somewhat less likely to be uninsured as U.S. experience increases.

DISCUSSION AND CONCLUSION

Legal status constraints present considerable challenges to immigrant survival and mobility in U.S. society. The results of this study consistently point to the intergenerational health consequences of undocumented immigration and of family reunification policies that reunite family members with mixed documentation status. The drawbacks of being raised in families with one or more unauthorized residents

suggest further evidence of an emergent policy dilemma for those concerned with improving access to health care and the well-being of this vulnerable population of children. Several conclusions can be drawn from these findings for evaluating the health outcomes of immigrant children.

First, the results suggest that, although Mexicans are noted for their healthy birth advantage, children of recent immigrants in this study were no better off than those whose parents had lengthier U.S. exposure, net of legal status. This finding is consistent with other studies that report no health advantage to children of recent immigrants (Guendelman and English 1995), and indicate that good birth outcomes do not necessarily translate into healthier childhood experiences. Greater health risks may be attributable to other factors that simply outweigh any hypothesized benefits of cultural orientation, perhaps reflecting processes associated with survival and adapting to new ways and people, and often in marginalized neighborhoods, that may be initially harmful to child health.

Second, in support of the main hypothesis of this paper, findings suggest that children are much better off if both parents are legal immigrants. They are wealthier, have more food, better living quarters, more health insurance, and better health status. Children of undocumented parents were not sicker in the 2-week period prior to the survey, but the fact that they suffered greater poverty and poorer health status overall is probably more indicative of the cumulative health risks that result from undocumented legal status in the United States.

Poorer child health can be traced in part to social policies that seek to divide citizens and noncitizens; the hidden effects of these policies leave citizen children wandering at risk, subject to restrictive policies that target their noncitizen parents. In turn, child health risks rise because most undocumented immigrants must depend on "their personal financial resources and a tenuous patchwork of publicly-funded services for healthcare" (Galarneau 1994:204). Taken together, these results challenge widespread views about the "health paradox" among the Mexican-origin population in the United States. Findings such as those documented here and elsewhere indicate a health deficit rather than an advantage.

The results also emphasize the inadequacy of current assimilation frameworks that posit upward mobility among immigrant groups over time. In particular, legal status is key to understanding diverse outcomes among immigrant groups. Even though many undocumented immigrants have been in the United States for a considerable time (e.g., consistent with other larger data sources such as the Mexican Migration Project, half of this sample of undocumented immigrants had been here for 6 to 11 years), their children do not share the same health benefits experienced by children in legal households. Due to fears (such as having a loved one deported) and other uncertainties, these families also remain marginalized in U.S. society, and consequently their children suffer greater risks of poor health.

These findings, therefore, underscore the importance of arguments about the importance and cost-effectiveness of providing preventive and primary health care to the 3 or 4 million undocumented immigrants currently working in the United States, and to their children, the majority of whom are second-generation U.S. citizens. Addressing these needs carries particular significance for the future of a growing Chicana/o population, among whom these findings document an observable health deficit. This deficit, which may also exist among other Latino groups experiencing high rates of undocumented migration and uncertain legal status outcomes, contributes to existing health disparities and racial and ethnic inequality in the United States.

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